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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,138

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EXAMINER

FELTON, MICHAEL J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,138	Applicant(s) HU ET AL.	
	Examiner Michael J. Felton	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/23/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 7-9, 11-21, 30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6 and 32 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Correction

1. The examiner would like to acknowledge the applicant's request for correction and apologize to the inventors for the misspelling of Mr. Pikulik's last name on the published application. The spelling, as provided by the oath and the request for correction, has been corrected in our records.

Response to Amendment

2. Claims 1, 2, 7, and 10 have been amended. Claims 24 and 29 have been canceled. Claims 30, 31 and 32 have been added. Claim 3-5, 7-9, 11-21, 30 and 31 are withdrawn as being drawn to non-elected species.

Response to Arguments

3. Applicant's arguments filed 7/23/2007 have been fully considered but they are not persuasive. The applicant suggests that the functional groups and teachings of Cunkle et al. (US 6,416,627) would not lead one of ordinary skill to structures that meet the conditions of the instant claims. However, according to the Chemical Abstract Service abstract of Cunkle et al. patent, which represents one of ordinary skill, a compound is shown that meets the requirements of claim 1 (CAS Abstract number 2001:208339 included in the "Examiner's search strategy and results" mailed with the previous office action). This indicates that one of ordinary skill would have been able to

interpret Cunkle et al. to form molecules that would meet the requirements of the claims as described in the previous office action.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2, 6, 10, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claim 1 recites the limitation "the lignocellulose materials" in line 3. There is insufficient antecedent basis for this limitation in the claim. The applicant has amended this limitation, however, the amendment does not correct the lack of antecedent basis. The examiner cannot determine what material is being used in this phrase, "comprising the reaction of the lignocellulosic materials in an aqueous medium." If "the lignocellulose materials" refers to "light stable and process-stable lignocellulosic materials" already described as the product of the method being claimed. This would mean that the process would be to react already light stable materials with bleach, and yellowing inhibitors and light stabilizers as described in the claim. It appears that if the above is true, then the claim is recursive, and contains not starting material.

2. Claim 1, the phrase, "provided that: i) Y2 is hydrogen or ii) Y2 and Y1 are both absent and Y is hydrogen", added to page 5 of claim 1 is not found in other portions of the specification with respect to the functional groups K, L, and M. It is unclear if this is

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a duplication of a previous claim limitation for Y1, Y2 and Y, or if it is a new condition not laid out in the specification (new matter).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 1, 2, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunkle et al. (US 6,416,627).
6. Regarding claims 1 and 2, Cunkle et al. disclose stabilizers to prevent the loss of brightness and enhance the resistance of yellowing in pulp or paper, especially pulp or paper containing lignin. The invention is disclosed to be added at various pointes in the paper-making process, especially at the wet end (aqueous solution) which also includes bleaching sequences. Although Cunkle et al. do not disclose the specific compound by name or specific structure, the molecule defined in the instant application would result

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from the random attachment of the groups disclosed in columns 3 and 4. In particular a compound meeting the claimed structure of the instant invention could contain the following groups disclosed by Cunkle et al.; a piperidine ring (col. 5, compound 1A), an ethylene amine (col. 5 line 1), and a bridging group (col. 7, compound 13).

It would have been obvious to one of ordinary skill in the art at the time of invention that the compound elected would have been produced by the process and chemical groups disclosed by Cunkle et al. Barring any unexpected results, the compound in question would have been expected to performed as well as many other similar molecules created by Cunkle et al.

7. Regarding claim 6, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the addition of a yellow inhibitor or light stabilizer with other paper processes, such as those used to form paper and the coating of papers with additives such as UV protectors that are commonly known in the art.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunkle et al. (US 6,416,627) in view of CAS report on created on 3/29/2007. The CAS report lists the following chemical name, 1,2-Ethanediamine, N-(1-hydroxy-2,2,6,6-tetramethyl-4-piperidiny)-N'-[2-[(1-hydroxy-2,2,6,6-tetramethyl-4-piperidiny)amino]ethyl]-. This appears to be the same molecule as that claimed in instant claim 32, but without six chloride ions as anions. It would have been obvious to one of ordinary skill in the art at the time of invention that this molecule would have been taught by Cunkle et al., as illustrated by the CAS report, and it would have also been obvious that charged

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molecules associate with cations or anions, of which chlorine is a widely used anion in paper making.

Allowable Subject Matter

9. Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Felton whose telephone number is 571-272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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